

TREES AND MOISTURE.
The Old But Ever New Question of Watering at Transplanting Discussed Once More.

A correspondent of Green's Fruit Grower says: "I have planted, perhaps, a million of trees in my lifetime. I have met with but few failures, and cannot remember having watered any of these trees. If the soil is made thoroughly fine before planting; if the soil about the roots is pressed in very firm, as firm as a fence post; if the soil is left loose on the top, and kept continuously loose by cultivation, the trees will live even though the season may be dry." In connection with this paragraph, it may be noted that, on one occasion within the experience of the writer, a large number of trees that had been planted in the spring, and had grown tolerably well, showed signs during the following very dry summer of wilting their leaves for want of water. An examination seemed to show that although the trees had been well planted in the common acceptance of the term, yet the earth in many cases was not packed closely around the roots. It was not convenient to water them. The owner was recommended to pound the earth around the trees with a heavy paving runner. This was done. It is almost impossible to convey an idea of the force used on this occasion. A force was exerted fully equal to that employed by the regular rammers in paving the streets. The earth being very dry was reduced to fine powder by this process, and moisture was drawn upward by capillary attraction. In a couple of days afterward, there was not the slightest sign of wilting, although no water had been applied, and they continued to grow without any evidence of suffering for want of water until the next rain came. Had the soil not been heavily beaten in this way, their death would have been absolutely certain.

FORCING VEGETABLES.
The Style of House Most Favored for This Purpose by the Market Gardeners of New England.

The market gardeners of Worcester county, Mass., have a handy style of hot house for forcing all sorts of vegetables. During winter lettuce and beets are marketed, and cucumbers and tomatoes started. The plan, herewith shown, diagonal pieces from center of bed to center of glass. Houses may be of any length, but that of C. L. Hart-



CUCUMBER AND TOMATO HOUSE.

shorn, from which our plans were taken, is 200 feet long. The house is 20 feet wide, the roof having a 12-foot pitch. Others have a 16 foot front pitch with 8-foot pitch at the back. For a 16-foot pitch the front side would be 4 feet high and for the 8-foot rear, 8 feet high. The stakes for cucumber wires are about 9 feet long. The stakes are set a few yards apart through the house, and wires strung from stake to stake over which cucumbers climb. Tomatoes are trained up on stakes along the edge of path and bed. Raising early vegetables thus becomes simple, and where markets are good has been found more profitable than any branch of farming.—Farm and Home.

Many Virtues in Apples.
The apple is such a common fruit that few persons are familiar with its remarkably efficacious medicinal properties. Everybody ought to know that the very best thing he can do is to eat apples just before going to bed. The apple is excellent brain food, because it has more phosphoric acid, in an easily digestible shape, than any other fruit known. It excites the action of the liver, promotes sound and healthy sleep, and thoroughly disinfects the mouth. It also agglutinates the surplus acids of the stomach, helps the kidney secretion and prevents calculus growth, while it obviates indigestion and is one of the best preventives of diseases of the throat. Next to lemon and orange it is also the best antidote for the thirst and craving of persons addicted to the alcohol and opium habit.

Spraying with Kerosene.
The San Jose scale is constantly spreading in all directions and in some parts of the south is destroying the peach trees. No satisfactory spraying material except kerosene has been discovered, even whole-oil soap emulsion failing to get off the insects unless very carefully applied. The application of kerosene is not safe for the tree, although a newly-invented spraying pump promises to make it safer. This pump is so constructed that it mixes the oil with water in the nozzle and allows a very light coat of kerosene to be applied. This should be done on bright days in the winter while the buds are dormant, and under favorable conditions works very effectively.—Farmers' Voice.

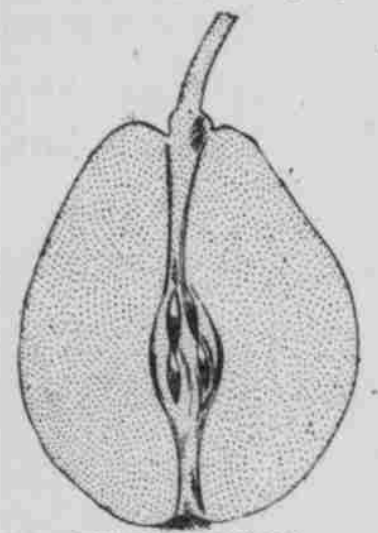
Coal Ashes for Orchards.
That coal ashes are beneficial when spread on the surface of apple orchards in grass cannot be disputed. But they contain scarcely any mineral fertilizer, and are, of course, having passed through fire, destitute of any other. Undoubtedly they benefit by setting as a mulch, and where they cover grass causing it to die out and rot. In this way they supply considerable fertility and moisture indirectly. Wherever coal ashes have long lain under fruit trees there will be an abundance of tree roots just under the ashes where the grass has been killed.

Michigan will grow beets to perfection. So will some sections of Illinois.

HORTICULTURE

DELICIOUS NEW PEAR.
It is Called the Dempsey and is a Combination of Bartlett and Duchesse d'Angouleme.

If parentage should tell for anything in the production of a new fruit one would expect a combination of Bartlett with Duchesse d'Angouleme to be productive of good, and that for once expectations were not in vain is evidenced in the very fine pear Dempsey, specimens of which were received at this office from the holders of the stock at Toronto. Coming in full condition at a season when the generality of good



THE DEMPSEY PEAR.

pears is overripe, the Dempsey is a welcome addition to the list. We ate the fruits with a good deal of gusto.

The Dempsey was produced from a seed of the Bartlett fertilized with Duchesse d'Angouleme. The tree is described as an upright, good grower; foliage large, glossy dark green, resembling both parents. Fruit large, obtuse pyriform, irregular in outline, as is seen in our life sketch. Skin smooth, green, changing to yellow as it ripens, with a slight brown tinge where exposed to the sun. Stem about an inch long, stout, and set slightly to one side. Calyx shallow. Flesh white, fine grained, tender, buttery, almost melting, with a rich, sweet, delicious flavor. As a dessert or market pear it is of the highest merit. Season, October and November. Judging from the condition of the samples before us, we should regard the fruit well adapted for export, and that after all is not the least valuable attribute.—American Gardener.

THE APPLE ORCHARD.
Hill Location is by All Odds the Best and Safest in Almost Every Locality.

The soil for an apple orchard should be selected with a great deal of care. It need not be a rich soil, but it must be good enough for the apple orchard, and we find in many cases apple orchards set out on soils entirely unsuited for them. Some people have the idea that the poorer the soil the better it will be for the apple orchard. This opinion evidently arose from the experience of people in settling out orchards on very rich land and finding them unsuited for them. They quite naturally inferred that if the rich land was not good the poor land must be good. But rich land is not suitable, for the reason that it occasions a too great growth of wood and not enough of fruit buds. As we say: "It all grows to foliage!"

Land should be rich enough to insure a good growth of wood, but not too rich to permit fruit buds to develop in large numbers. Generally a meadow will be found unsuitable, for the reason that the soil-water stands so near the surface that the roots are soaked during a large part of the year. The water does not have to lie near the surface to do this, for, as is well known, the roots of apple trees penetrate very deeply into the ground, sometimes seven or more feet. The hill location is generally best for the apple orchard, for the reason that there is no underlying sheet of water. The drainage is natural and rapid, and the roots are always able to do their work without interference. A medium clay soil is generally good, for the reason that in it the fertility is held till taken up by the roots. A sandy soil gets rapidly poor, and when fertilized leaches so badly that much of the manure is lost.

FRUITS AND VEGETABLES.

Cut back the grape vines you planted last spring.

Don't use too much coarse manure on the grape vines.

Destroy the old orchard that you are sure is past usefulness.

If evergreens did not do well last summer, mulch them.

California figs are coming into consumption in great shape.

The quince is quite easily grown and is a choice fruit for preserves.

In the cellar. Don't let the odor of decaying vegetables permeate the house.

Give winter protection to even the hardiest fruit, for we sometimes have severe winters.

We again insist that the west can grow apples in abundance, if care is taken as to the making or selection of varieties.

As soon as the ground is well frozen mulch where you intend to mulch. The purpose of mulching is to keep the ground from alternate thawing and freezing.—Western Plowman.

Assuring a Steady Income.

The man who keeps cattle, sheep and hogs, and breeds his work mares regularly, has his business so arranged that money is coming in at all seasons. His cattle and wool go to market in the spring and early summer, and his hogs and mutton sheep go in the fall and winter. If prices are not best for all they are sure to be good for one thing or another. His corn and hay are all fed, and he still has his wheat to sell for cash. His income comes to him at such times that he has no use for the money lender, and he has no notes to meet or interest to pay.—Orange Bulletin.

WHAT MEAT TO EAT.

Pointers by Professor Wiley of the Agricultural Department.

Professor H. W. Wiley, chief of the chemistry division of the agricultural department, in a recent talk to the Washington Star, said:

Meat should never be eaten till they have properly ripened—that is to say, until they are about to decay. They should be 3 weeks old at least before being cooked. A chicken killed today ought to hang three weeks in a cold place before going on the table.

Lean hogs are better than fat hogs, and farmers before long will find more profit in raising the former than the latter. The fattening of pigs in old days and even now all that farmers did with the animal to fit it for market, but soon it will be known that meat is better than fat meat for meat eaters. Men could not and should not live upon meat alone, for the reason that it is wanting in carbohydrates—that is, sugars and starches. These are transformed by the body into fattiness. Fat meat does not give this, although people have always eaten with the idea that it is fattening. Cereals contain the carbohydrates, sugar and starch, and these are fat givers.

A hardworking muscular man, who needs heat and energy, should eat plenty of fat meat, but a man of sedentary habits should partake sparingly of it and should consume more lean. The egg is a wonderfully perfect food, containing all the chemical elements needed to sustain the body, except the carbohydrates. A meal of soft-boiled eggs and rice is most evenly balanced. The egg contains the needed fat, phosphorus and nitrogen, and the rice possesses starch and sugar. As a fact, however, man feeds himself largely according to his taste and ability. His mental attitude toward his food has everything to do with his power to digest it, and if he does not like it the probability is that it will not do him any good, no matter how well balanced it may be.

Meat should be kept three weeks before eaten. It should be properly ripened, and then there would be no danger from diseased meat. Hang a killed chicken out of a window, as the Germans do, head down, and when the head falls off the fowl is ripe for eating. It should not be touched before. The same rule is true of game. Fish and eggs should be eaten the day they are taken, but fish, if frozen on the day caught, will be good any time taken from the ice. Fish is not a brain food. That's an old idea, all wrong. The phosphorus needed by the brain comes from vegetables, eggs and plants.

Heifers For Beef.

According to The Live Stock Indicator, a great change has taken place in regard to the values placed upon heifers by buyers of fat cattle during the last few years. Before the dressed business had been developed shippers discriminated against heifers, and they could only be sold for city slaughter. Now the large firms engaged in slaughtering cattle and shipping dressed beef to all the leading cities of the country buy heifers as readily as steers, although they still endeavor to secure them at a slightly lower price than steers of equal quality. As a mixed lot often comes in, as good as price as if all were steers, for butchers know that heifers dress equally as well as steers, and the beef is undoubtedly as good. But to secure the highest price heifers must be well bred and fully finished, otherwise they will still be discriminated against. At 18 to 20 months the heifers would not have arrived at maturity and would be rather light in weight to meet the requirements of the best trade. From 1,200 to 1,500 pounds is the desirable weight, and it will usually require an age, even with good breeding and feeding, of from 24 to 30 months to give a weight of 1,200 pounds or over. Cattle cannot be fattened in 60 or 70 days, but it requires from eight months to a year. It does not pay to feed all kind cattle to finish, and from three to four months on full feed will usually give better results than when feeding is longer continued. These are the views of a practical cattle breeder.

Antiseptic Dressing.

Horses, from the nature of their work—especially those engaged in the hunting field—are peculiarly liable to accidents resulting in wounds of a more or less serious character. Thanks to the modern introduction of the antiseptic treatment into the stable, wounds which formerly led to serious trouble are less common than in past times. When even a wound takes place, it should be treated as early as possible with an antiseptic dressing. The antiseptic dressings that may be used are various—many slightly differing in their action from others. A perfect solution of carbolic acid may be applied or one of the "fluids" popularly known to the majority of the public. Others will be found equally efficacious. Should the wound be severe and gaping no time should be lost in obtaining the services of a veterinary surgeon to stitch or suture its lips together and to be afterward, of course, allowed to follow up his own method of curative treatment. Meanwhile before he appears on the scene the application of an antiseptic dressing will aid and not retard recovery under the hands of the professional man.—London Live Stock Journal.

The extensive cultivation of alfalfa in some of the states where little water falls is leading to the introduction of sheep breeding and woolgrowing as a leading industry. The alfalfa will grow and keep green in the driest time, as it sends its roots down deep for moisture. The sheep also will live with less water than any other farm animal. In all our eastern states sheep may be kept in summer on pasture with no water except what they get by eating grass at night or in early morning while it is covered with dew. This does not prove, however, that sheep can be kept on pasture in regions where dew seldom or ever falls. Even with dew in the morning, if the weather be warm, the sheep will drink some before night if they get the chance to do so.—Boston Cultivator.

Pure Blood.

The introduction of pure blood and reaching that stage in the business where all cattle will be pure bred cannot be commensurate in a short time, but the longer we delay the important work of building up the herds along these lines the longer it will be before we have desirable blood in them. All stockmen should remember this fact and begin today to allow nothing but pure bred bulls among their cattle.

FRUIT AND FLOWERS

GOLD STORAGE.

Only Choice Fruit Should Be Used. Pears Pay Well.

A cold storage house on the farm undoubtedly pays, but it must be run properly. In the first place, it must be on a farm where ice can be harvested cheaply in the winter time. During the winter months the work on the farm is so light that every farmer can spend several weeks at a month in cutting and storing ice. Cooperation should be arranged between a half a dozen farmers of one neighborhood to fill each other's icehouse. With ice plentiful, it is an easy matter to keep fruits, poultry and other produce in cold storage, says a correspondent of The American Cultivator, who adds:

One of the best fruits for keeping in cold storage is pears. So far nobody has succeeded in raising the right sort of winter pear—that is, a pear equal to our Bartlett or Seckel. The result is it pays better to keep these pears until late in the fall than to sell them during the height of the season. Boston icehouse Seckel pears are a distinct feature of our late autumn markets, and they sell as high as \$4 per bushel box some seasons. It is due simply to the fact that a large quantity of keeping quality pears is stored in Boston, and the pears are the best in the market.

Now, any grower of these pears can keep his fruits just as well. The very choicest fruits should be selected for this work. Hereafter farmers who have stored their pears have selected the common kinds for the work, because they thought it more or less an experiment. That does not pay. People who buy Bartlett and Seckel pears around Thanksgiving and Christmas are those who can afford to pay the highest prices, and they want only the choicest fruits. They must first be free from all spots or blemish, and then they must be kept in a condition that will make them attract the eye when placed on the stand.

What applies to pears is equally true of many other fruits. Choice grades of fall apples kept until late with soil well, but they must be kept in cold storage. A cold cellar will not answer. Ice must be had to keep an even temperature, and is an even temperature that makes all fruits keep a long time.

Spraying the Currant.

Some of the red and white varieties of currants shed their leaves very early, frequently before the end of summer. As, in spite of this fact, they often fruit well the early dropping has not been very generally regarded as a sign of disease. But some experiments which Professor Goff of the University of Wisconsin tells about seem to indicate that such is the case. He says:

Some years ago the experiment was made at our station of spraying currant bushes with the bordeaux mixture and spraying with copper carbonate solution in the spring, and the applications were made until June 1. The result was that the sprayed bushes had their foliage considerably longer than those not sprayed, but



CURRANT BUSH SPRAYED AND UNSPRAYED.

the fruit was so badly soiled that the treatment was not considered practicable, and so it was abandoned.

The past season the experiment was made of a single spraying with bordeaux mixture after the harvesting of the fruit, and the result was striking, as appears from the accompanying illustration of two plants in the same row, the left one of which received the spraying, while the right one was not sprayed.

The early dropping of the leaves of the red and white currant is due to the attack of a fungus, Septoria, ribes, and our experiment the past season seems to show that this disease may be very largely prevented by spraying the bushes after the fruit is harvested. The premature dropping of the leaves reduces the vigor of the plant, and doubtless tends to the production of inferior fruit.

Roses in Winter.

Hybrid perpetual and other roses which are liable to have their wood injured should be strawed or buried a few inches underground. But ever blooming ones are none the worse for being partly frozen down, as it acts as a needed pruning. So, if a covering of leaves be placed about the base, kept there by a mulch or two of soil, it secures the life of several inches of growth, which is sufficient, says Joseph Meacham in Gardening.

Flower Notes.

Fine results in growing cuttings of the Cyperus alternifolius (umbrella plant) are reported from the Kansas station.

The Japanese snowball is one of the most perfect shrubs that have been added to our landscape for many years. The bush is entirely clean and very pretty. The bunches of flowers are smaller than those on Opulus, but the color is clean and clear, and the flowers persist for two or three weeks, says E. P. Powell in The Farm and Fireside.

Browallia speciosa major, a novelty first offered this season, has received good mention as an acquisition to greenhouse flowering plants.

Whole oil soap is recommended for scale on roses.

Winter Dairying.

Winter dairying is no business for a layman or one who will neglect it for any reason.

Buttermilk.

An ordinary glass of buttermilk contains about as much nutriment as two ounces of bread or an ordinary sized potato. Buttermilk in most locations is used as food for pigs only, but this by-product near large cities is very much sought after as a beverage, especially in warm weather. It furnishes more nutriment than almost anything except new milk.

ENTRANCE TO HIVES.

The Way to Manage It For the Comfort of Bees in Winter.

Bees should have the benefit of every convenience in passing in and out of their hives in winter. The front yard of each hive should be thoroughly cleaned up of all grass or weeds, and the earth banked up to a level of the bottom board of the hives. When hives are thus set on the ground—and they should not be set anywhere else—the ground should be graded up, not raised higher where the hive is set, and thus have the hives a little above the level of the ground. In this manner the water is carried off and prevents dampness about the hives. So says A. H. Duff in Texas Farm and Ranch, and his further remarks about the entrance to hives are as follows:

The entrance to the hives has much to do with the comfort of the bees, not only in winter, but in summer also. It is necessary at all times to have the ground sloped up to the top of the bottom board, that the bees when dropping in front of the hive can reach the entrance by crawling and without again taking wing. When the weather is cold, they frequently come home in a benumbed condition and are unable to take wing the second time, and the result is they die near their own home in large numbers. Bees coming in loaded with honey should be provided with this convenience as well.

The greatest damage is done during the winter, and it does not take much loss of bees in this manner to greatly weaken the colony at this time of year when they are at their lowest number. Bees frequently clean house in winter on days that are pretty cool and so cold that no bees will appear on the outside. They will thus carry dead bees from the back part of the hives and deposit them in front and near the entrance. In doing this work they often clog the entrance with dead bees so tightly that they are unable to get out when a warm day comes, and in such cases it is necessary to open up the entrance for them. This must be carefully looked after on the approach of fine days when they are liable to fly out.

The ordinary entrances to hives as used in summer, which are about three-eighths of an inch wide and 10 or 12 inches long, should be contracted up to the limit of 1 1/2 inches. No colony is so strong that it needs the full entrance in winter, whether mild or otherwise, and the entrance is better thus contracted from October until May.

Pacific Coast Wheat Seeding.

In California fall rains were late in coming and seeding was generally delayed. In fact, there was not the usual opportunity for fall following that was desired. But in reporting this feature The Orange Judd Farmer says it means but little, as the seed may be sown at any time during the winter after the rains come without in any material way damaging the prospect for a satisfactory crop. According to the journal mentioned, in Oregon and Washington less than the usual fall following was done, but the proportion is not large enough to in any way affect the crop possibilities of the states. The seeding has been conducted under favorable conditions and the outlook is for a large increase in the spring sowing at the expense to some extent of the fall following. On the north Pacific coast alone is there reported less area now seeded than was harvested this year. In every other state there is an increase, in most of them a very material one, and the total acreage, assuming that California will be able to seed all that her growers report as intended for wheat, will be the largest ever seeded to winter wheat.

Poultry House Protection.

Too much glass in the south side of the hen house gives in winter a hot-house temperature at noon, with perhaps a zero temperature at midnight. The temperature should be even as possible for best results. The Farm Journal advises, if your house front is covered with glass, to prepare



SHUTTER FOR NIGHT.

shutters or heavy screens to put on at night in cold weather. The latter may be made by nailing canvas on a frame and hanging it on inside of the window as shown in the illustration. Two screw eyes and a cord rightly placed will enable you to raise or lower the screen from the entrance to the house.

Cheapest Form of Phosphoric Acid.

According to the Geneva (N. Y.) station, soluble phosphoric acid has the same value pound for pound whatever its source. At present dissolved rock is the cheapest source, and this is the form in which farmers should buy phosphoric acid if they desire to receive the largest amount of actual plant food for their money.

News and Notes.

The American Malva Propaganda is making every possible effort to secure for corn a thorough and first class representation at the Paris exposition of 1900.

A supply of salt, available whenever the cow wants it, is necessary to maintain a high milk yield.

As a rule it is not possible to have dust free air in a barn if the cows are fed just previous to milking. If the hay or feed is dusty, it should be sprinkled and fed a sufficient time before milking so that the dust may be settled and the stalls ventilated, cleaned and sprinkled or flooded previous to the time of milking.

St. Petersburg is to have an international poultry show from the 13th to the 28th of May, 1899. Exhibitors will be granted reduced rates for their exhibits on all Russian railroads and free entry for same on condition that they be exported from Russia within two months after the close of the exhibition.

An investigation of the alkali soils of the Yellowstone valley has been made by the United States department of agriculture. It was found that in the original prairie soil above the ditch there is not sufficient alkali to be injurious to vegetation. The amount of alkali was greater in the lower depths of the soil. As a rule water is used in excess on all of these lands under irrigation, and in all cases the first injury was from the accumulation of water from excessive applications.

Colorado is reported to have received 49 of the gold and silver medals for best displays at the Omaha exposition.

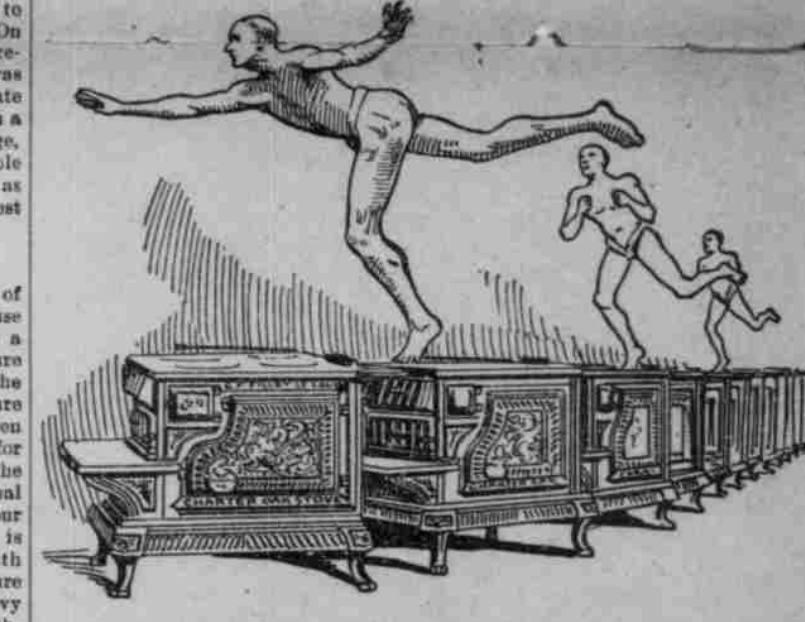
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